

REMARKS

Applicants appreciate the Examiner's thorough consideration provided the present application. Claims 2, 3, 5-17 and 19-26 are now present in the application. Claims 2, 9, 22 and 24 have been amended. Claims 2, 9, 22 and 24 are independent. Reconsideration of this application, as amended, is respectfully requested.

Claim Rejections Under 35 U.S.C. §112

Claims 2, 3, 5-17 and 19-23 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. This rejection is respectfully traversed.

In particular, the specification in paragraphs 028 and 029 discloses:

If the user pushes a certain key on the remote controller of the signal output apparatus 100 in order to display user inputs, this results in identifying information about the signal output apparatus 100 being displayed in an OSD form. The controlling unit 110 decides whether the volume of the OSD is larger than a certain volume, which may be preset.

At that time, if the volume of the OSD, which is about to be displayed, is smaller than a certain volume, the controlling unit 110 controls the OSD generating unit 130, so that the OSD is generated and transmitted to the signal input apparatus 200 through the digital connection. Further, the controlling unit 110 transmits the status that the OSD is being transmitted through the digital connection to the controlling unit 210 of the signal input apparatus 200.

In other words, the specification discloses that the user operates the input unit (remote controller) of the signal output apparatus to display his inputs, thereby identifying OSD information displayed on the signal input apparatus. In order to display the OSD information, it determines whether the contents are requested and whether the requested contents are OSD information. Therefore, the specification fully supports the features of all pending claims. Accordingly, all

pending claims now comply with the written description requirement. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, first paragraph, are therefore respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 24-26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shintani, U.S. Patent No. 6,490,002 (hereinafter “Shintani”), in view of Kambe et al., U.S. Patent No. 6,487,305 (hereinafter “Kambe”). This rejection is respectfully traversed.

A complete discussion of the Examiner’s rejection is set forth in the Office Action, and is not being repeated here.

In light of the foregoing amendments, Applicants respectfully submit that this rejection has been obviated and/or rendered moot. While not conceding to the Examiner’s rejection, but merely to expedite prosecution, as the Examiner will note, independent claim 24 recites a combination of steps including “determining an OSD for transmission; comparing a volume of an OSD to be transmitted with a certain volume; and selecting either an analog transmission or a digital transmission of the OSD based on the comparison result.”

Applicants respectfully submit that the combination of steps as set forth in amended independent claim 24 is not disclosed or suggested by the references relied on by the Examiner.

Shintani discloses the HD signal and the analog OSD signal are sent to a digital input and an analog input, respectively, of the HDTV (see col. 3, lines 14-24.) Shintani also discloses that the OSD information can be transmitted along with the HD digital data via a high speed digital interface (see col. 3, lines 25-32.) However, Shintani nowhere discloses transmitting the OSD

information based on the comparison result of the volume of the OSD information with a certain volume as recited in independent claim 24.

The Examiner alleged that Shintani in col. 3, lines 17-32 clearly suggests that the STB is capable of such comparison because the STB is able to choose the digital or analog path. Applicants respectfully disagree. Although Shintani discloses that the OSD information can be transmitted via the digital or analog path, Shintani fails to teach what the choice of using the digital or analog path to transmit the OSD information is based upon. Shintani does not even mention anything related to the volume of the OSD information, and therefore cannot suggest that the STB is capable of such comparison as alleged by the Examiner. In fact, since Shintani in col. 3, lines 25-32 discloses that the OSD information can be transmitted along with the HD digital data via a *high speed digital interface*, it seems to suggest that the volume of the OSD information is not a concern because of the high speed digital interface. By using only the high speed digital interface to transmit the HD digital data and the OSD information, Shintani does not even need any analog interface at all.

Applicants also respectfully submit that it is improper to combine Shintani and Kambe. In particular, although Kambe discloses, instead of using image date, using a set of character string indicating a spatial characteristic of one particular composing string to reduce the data volume, both the image data and the character string data are *digital* and *need to be transmitted via a digital interface*. Therefore, Kambe's data-reducing approach cannot apply to Shintani's *analog* OSD information.

In the alternative, even if the OSD information is digital, assuming *arguendo*, the OSD information can only be transmitted via a digital interface, *regardless of the volume of the OSD*

information. Therefore, there is no need to select either an analog transmission or a digital transmission of the OSD information based on the volume of the OSD information as recited in independent claim 24.

On the other hand, in the present invention, the OSD is transmitted together with AV data in the digital manner when the volume of the OSD is lower than a certain volume, and is transmitted in the analog manner when the volume of the OSD is greater than or equal to a certain volume, thereby reducing the loading of the digital path. This feature is clearly absent from Shintani and Kambe.

Accordingly, neither of the utilized references individually or in combination teaches or suggests at least the above-noted feature of amended independent claim 24. Therefore, Applicants respectfully submit that amended independent claim 24 and its dependent claims (at least due to their dependency) clearly define over the teachings of the utilized references. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103 are respectfully requested.

Additional Cited References

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but rather to merely show the state of the art, no further comments are necessary with respect thereto.

CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Dated: July 6, 2006

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